

19 (new). The system of claim 12, wherein the input signal is received from an outage notification monitor of the utility meter.

20 (new). The system of claim 12, further comprising a memory storage functionally coupled to the processor for storing computer-executable instructions executed by the processor; and

wherein said computer-executable instructions cause the processor to determine whether the utility status signal exceeds a threshold value and, if so, to generate the status message.

21 (new). The system of claim 20, wherein the memory storage further stores data relating to signal formats compatible with each of the plurality of different types of communication devices.

#### REMARKS

After entry of the foregoing amendments, claims 12 - 21 are pending in this application. Claims 1 - 11 have been deleted, while claims 12 - 21 have been newly added. No new matter has been added. Reexamination and reconsideration of the application, in light of the new claims, is requested.

#### ***Objections to Drawings and Specification***

The examiner objected to the drawings as failing to comply with 37 CFR 1.84(p)(4) because the reference character 119 was used to designate both the Voltage Monitoring component and the Connect/Disconnect Interface component. By way of the above amendments, Applicant has proposed to renumber the Voltage Monitoring component using reference character 117. Such an amendment is consistent with the reference characters recited in the specification at page 5, line 24. Applicant has also amended Fig. 1 to correct a typographical error. A substitute Fig. 1 is attached to show the proposed drawing corrections, entry of which by the examiner is requested.

The examiner objected to the drawings as failing to comply with 37 CFR 1.84(p)(5) because they did not include the reference signs *120*, *114*<sup>1</sup>, and *117*. The examiner also objected to the drawings as failing to comply with 37 CFR 1.84(p)(5) because they included the following reference signs not mentioned in the description: *112*, *114*, *150*, *160* and *180* in Figure 1.

Applicant has amended the specification, at the locations noted by the examiner, to change reference sign *120* to *112* and to change reference sign *130* to *114*. As previously mentioned, Applicant has proposed an amendment to Figure 1 to change the reference sign used to identify the Voltage Monitoring component to *117*. Applicant notes that reference signs *150*, *160* and *180* were in fact mentioned in the specification, as filed, at page 6, lines 11-12. Accordingly, Applicant believes that the reference signs used in the specification now agree with the reference signs used in the drawings.

The examiner objected to the disclosure because of the following informalities: reference sign *108* should have been *208* at page 8, line 3 and at page 9, line 8; and reference sign *218* should have been *228* at page 8, lines 7 and 16. Applicant has made the appropriate correction by way of the above amendments.

### ***Claim Objections***

The examiner objected to the specification as failing to provide proper antecedent basis for the claimed subject matter. Specifically, the examiner states that the limitation “the microprocessor is further operative to generate the status message in a format untransmittable by the output device” in claim 7 is subject matter that is not provided by proper antecedent basis. Applicant has deleted claim 7 without prejudice. Accordingly, without conceding that the subject matter of claim 7 was not provided by proper antecedent basis, Applicant submits that the objection is moot.

The examiner objected to claim 10 under 37 CFR 1.75(c), as being of improper dependent form. Again, Applicant has deleted claim 10 and the objection is now moot.

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<sup>1</sup> Reference sign *114* was shown in Figure 1 as filed. Applicant believes that the examiner meant to indicate that reference sign *130* was not shown in the drawings but was mentioned at page 5, line 20.

***Claim Rejections – 35 USC §112***

The examiner rejected claims 1, 7, 9 and 11 under 35 USC 112, 2<sup>nd</sup> Paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the examiner noted that claim 1, 7, 9 and 11 did not include sufficient antecedent basis for certain terms. Applicant has deleted claims 1, 7, 9 and 11. All newly present claims are believed to be in compliance with the requirements for antecedent basis.

***Claim Rejections – 35 USC §102 & §103***

The examiner rejected claims 1, 3 and 5 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,031,209 to Thornborough et al. ("*Thornborough*"). The examiner rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over *Thornborough* in view of U.S. Patent No. 5,923,269 to Shuey et al. ("*Shuey*"). The examiner rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over *Thornborough* in view of U.S. Patent No. 6,304,231 to Reed et al. ("*Reed*"). The examiner rejected claims 6-8 under 35 U.S.C. § 103(a) as being unpatentable over *Thornborough* in view of U.S. Patent No. 5,875,234 to Clayton et al. ("*Clayton*"). The examiner rejected claims 9-11 under 35 U.S.C. § 103(a) as being unpatentable over *Thornborough* in view of U.S. Patent No. 5,875,234 to Clayton et al. ("*Clayton*") and in further view of U.S. Patent No 5,994,892 to Turino et al. ("*Turino*"). Claims 1 - 11 have been canceled, rendering such rejections moot. Moreover, for the following reasons, Applicant submits that new claims 12 - 21 are patentable over *Thornborough*, *Shuey*, *Reed*, *Clayton* and *Turino*.

Independent claim 12 recites a system for monitoring and transmitting utility status via a universal communications interface. The universal communications interface is configurable for communicating with a plurality of different types of communication devices. Each different type of communication device is operative to communicate with a receiving device via one of a plurality of different communication mediums. A slot functionally coupled to the universal communications interface is configured to interchangeably connect one of the plurality of different types of communication devices. As further defined in claim 13, the plurality of

different communication mediums can include radio frequency waves, infrared waves, telephone lines, cable lines, fiber optic lines, satellite links, power lines, etc.

Accordingly, an advantage of the present invention, as defined in independent claim 12, is its ability to adapt to new and changing communication mediums by interchangeably accepting different types of communication devices. As stated a page 2, lines 1 - 12 of the Specification:

A significant drawback of prior art AMR devices is that they are functionally limited in their communications options and are thus not generally adaptable to evolving communications technology. AMR devices are typically constructed with hardware and/or software components for transmitting and receiving AMR data over a single communications medium. Some prior art AMR devices may be equipped with components for transmitting and receiving AMR data over a finite number of communications media. However, as communications technology advances and new and different communications mediums are selected for the transmission of AMR data, incompatible AMR devices must be replaced at great expense to the utility companies.

With the exception of *Clayton*, the prior art references cited by the examiner merely disclose AMR systems that, as described above, are functionally limited in their communications options. *Clayton* does not describe an AMR system. Therefore, Applicant submits that none of the prior art references describe, teach or suggest all of the elements of independent claim 12, either alone or in combination.

In particular, *Thornborough* discloses an AMR systems which is configured for communications over a single communications medium, i.e., a telephone network. While the system of *Thornborough* is able to transmit signals in accordance with both BELL and CCITT standards, all transmission signals are transmitted via a TX Out line 58 that is connected to a telephone interface circuit 42. See *Thornborough*: col.6, lines 55-65. *Thornborough* does not disclose the use of any communication medium other than a telephone system for transmitting AMR data.

Similarly, *Shuey* discloses an AMR system which is configured for transmitting and receiving AMR data over a finite number of communications media. Specifically, *Shuey* describes a solid state meter that incorporates an RF transceiver for communicating normal and

exceptional AMR traffic to an AMR network, a modem for so called dialback telephone communications with the AMR network and a UART transceiver, or the like, for communicating with a LAN. The solid state meter may also incorporate an IR port. See *Shuey*: col. 3, lines 28 - 34. Given that the AMR system of *Shuey* is a solid state meter that is specifically configured for communications via certain mediums, i.e., RF, telephone, LAN and IR, it does not have the ability to adapt to new and different communications mediums. In other words, other types of communications devices cannot be interchangeably connected to the solid state meter disclosed by *Shuey*.

*Clayton* discloses computer integrated telecommunications systems that provide a message exchange interface that transfers data and control requests generated by applications running on a computer system directly to a telecommunications unit. See *Clayton*: Abstract. In particular, *Clayton* discloses systems and method for integrating private branch exchange (PBX) systems with local area network servers. See *Clayton*: col. 1, lines 4-9. Applicant fails to see how the disclosure of *Clayton* is relevant to AMR systems. Nonetheless, the systems of *Clayton* are again limited to communication via a single communications medium, i.e. telephony networks.

*Reed* discloses an antenna configuration for use in an RF-based AMR system. A transceiver provides a signal representing the meter address and usage data to the antenna, for transmission to the central location where a receiving apparatus reads the usage data. The transceiver is also equipped to receive signals from the central location. See *Reed*: col. 4, lines 11 - 24. Accordingly, *Reed* does not describe, teach or suggest an AMR system that is able to communicate via multiple different communications media.

*Turino* discloses an automatic utility meter having internal modem capability designed within to transfer data to or from a host computer remote from the meter via a telephone line. See *Turino*: col. 24, lines 22 - 40; col. 16, lines 46 - 48; col. 14, lines 24 - 29 and 60 - 67. *Turino* does state generally that due to the system's modular and open architectural design, a variety of commercially available communications mediums to be incorporated to transfer the data, such as a radio transceiver, power line carrier or fiberoptic coupler. See *Turino*: col. 6 lines 56 - 61. However, nowhere does *Turino* describe that the system includes a universal communications interface configurable for communicating with a plurality of different types of communication

devices and a slot functionally coupled to the universal communications interface for interchangeably accepting different types of communication devices.

For the foregoing reasons, Applicant does not believe that either *Thornborough*, *Shuey*, *Reed*, *Clayton* or *Turino*, alone or in combination, describes, teaches or suggests, all of the elements recited in new independent claim 12. Accordingly, Applicant submits that new independent claim 12 is allowable over the cited art. Dependent claims 13 - 21, which include all of the elements of independent claim 12 are therefore also believed to be allowable.

#### CONCLUSION

The foregoing is submitted as a full and complete response to the Office Action mailed August 13, 2002. Applicant requests that all pending claims be allowed because, as shown above, they are patentable over the art of record. If there are any issues that can be resolved by a telephone conference or an Examiner's Amendment, the examiner is invited to call the undersigned attorney at (404) 853-8422.

Respectfully submitted,



Michael S. Pavento  
Attorney for the applicant  
Reg. No. 42,985

SUTHERLAND ASBILL & BRENNAN LLP  
999 Peachtree Street, N.E.  
Atlanta, GA 30309  
(404) 853-8000  
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